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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,823	12/28/2001	Shinichi Hoshino	500.41052X00	5554
24956	7590	10/21/2005	EXAMINER	
MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C. 1800 DIAGONAL ROAD SUITE 370 ALEXANDRIA, VA 22314			FERNANDES, CHERYL M	
			ART UNIT	PAPER NUMBER
			2163	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/028,823

Applicant(s)

HOSHINO ET AL.

Examiner

Cheryl M. Fernandes

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-7,9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7,9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. This communication is responsive to the Request for Continued Examination filed August 26, 2005. Claims 1-3, 5-7, 9, and 10 are pending. Claims 1-3, 5-7, 9, and 10 are amended. Claims 4 and 8 are cancelled.

### ***Response to Arguments***

2. Referring to the 35 USC 112 first paragraph rejection of claim 7, Applicant's amendments to the claim are acknowledged. As such, the 35 USC 112 first paragraph rejection of claim 7 is withdrawn.

3. Referring to the 35 USC 112 second paragraph rejections of claims 2, 3, 5-7, 9, and 10, Applicant's amendments to the claims are acknowledged. However, the claims, as amended, are now rejected under 35 USC 112 second paragraph due to the presence of further deficiencies.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3, 5-7, 9, and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Referring to claims 1, 2, 5, 6, 9, and 10, the claims recite the limitations:

- "the stored program of the interpreted language" in the first paragraph of the claims;
- "the query processing" in the second paragraph of the claims; and
- "the query processing in execution having invoked the program" in the second paragraph of the claims.

There is insufficient antecedent basis for this limitation in the claims.

Referring to claim 3, the claim recites the limitation: "the stored JAVA program which is not contained in the execution module", in the third paragraph of the claim.

There is insufficient antecedent basis for this limitation in the claim.

The term "unknown resources" in claims 3 and 7 is a relative term which renders the claim indefinite. The term "unknown resource" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Referring to claims 1, 2, 5, 6, 9, and 10, the claims recite the limitation "reserving a resource at execution of a query from the stored program of the interpreted language..". However, it is unclear as to whether the resource is reserved from the stored program or whether the query is from the stored program.

Referring to claims 1-3, 5-7, 9, and 10, the claims recite the limitation "reserving a resource at execution of a query ...and registering information about said reserved resource in a resource managing table, which is corresponding to resources already reserved...". However, it is unclear as to what corresponds to resources already reserved- the information registered or the resource managing table.

Due to the 35 USC 112 rejections, the claims have been treated on their merits as best understood by the examiner.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1, 2, 5, 6, 9, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Number 5,845,117 issued to Fujita, and further in view of US Patent Number 6,225,995 B1 issued to Jacobs et al (hereafter Jacobs).

Referring to claim 1, Fujita discloses a database management method for addressing to a commit request or a rollback request in a stored program written in an interpreted language (Abstract; Fig. 3), said method comprising the steps of:

- reserving a resource at execution of a query from the stored program ('commit' request for a resource, see Fig. 3; col. 7, lines 50-64) and registering information about said reserved resource in a resource managing table, which is corresponding to resources already reserved in the query processing in execution having invoked the program ('Resource Manager (RM) table T1', see Fig. 3, element 11; col. 9, lines 4-13; col. 13, line 64 – col. 14, line 6, Fig. 6, elements 201-203);
- referring, at release of a transaction from the stored program (lock releasing request sent from Resource Manager (RM) to Lock Manager (TM), Fig. 6, element 206; col. 13, line 65 – col. 14, line 15; col. 9, lines 14-19), to a release resource managing table ('Lock Manager (LM)' table T2 is looked up, Fig. 3, element 12; col. 9, lines 20-45; col. 14, lines 21-46) and the resource managing table to determine a reserved resource which is registered in the resource managing table and which is not registered in the release resource managing table (col. 9, lines 5-67); and
- releasing, the reserved resource having been determined by said referring step (lock release of resources, col. 9, lines 46-57; col. 14, lines 21-46).

However, while Fujita discloses all of the above claimed subject matter, it remains silent as to a stored program of an interpreted language.

However, Jacobs teaches analogous art that includes a stored program of an interpreted language (JAVA runtime interpreter cartridge, col. 8, lines 15-33).

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It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Fujita to include a stored program of an interpreted language, as taught by Jacobs.

The ordinary skilled artisan would have been motivated to modify Fujita per the above for the purpose of enabling a programmable cartridge to act as an interpreter for an application and that enables web application developers to write server side applications to process browser requests (Jacobs, col. 8, lines 15-33).

Referring to claim 2, the limitations of the claim repeat the respective limitations of claim 1 above, including a stored JAVA program (Jacobs, col. 8, lines 15-33) and therefore claim 2 is rejected for the same reasons as claim 1.

Referring to claims 5 and 6, the limitations of the claims repeat the respective limitations of claim 1 above in the form of an apparatus (Fujita, Abstract; Jacobs, col. 4, lines 20-22; col. 31, lines 39-43). Claims 5 and 6 are therefore rejected for the same reasons as claim 1.

Referring to claims 9 and 10, the limitations of the claims repeat the respective limitations of claim 1 above in the form of a computer program (Jacobs, col. 4, lines 20-22). Claims 9 and 10 are therefore rejected for the same reasons as claim 1.

6. Claim 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jacobs, and further in view of Fujita.

Referring to claim 3, Jacobs discloses a database management method (col. 4, lines 20-22; col. 31, lines 39-43) for addressing to a commit request (summary, lines 43-46; 'browser request', col. 6, lines 33-36; col. 27, line 63-col. 28, line 6, Fig. 7E) or a rollback request in a stored JAVA program ('JAVA runtime interpreter', col. 8, lines 15-33; code is stored in storage device (Fig. 1, element 110), col. 6, lines 14-23; 'software modules' or 'cartridges', col. 6, lines 33-36, col. 7, lines 35-65; 'exemplary cartridges', col. 8, lines 15-33; col. 20, lines 16-30), said method comprising the steps of:

- analyzing a query request inputted from a terminal thereto ('browser request', col. 4, line 65- col. 5, line 5; col. 6, lines 33-36; col. 7, lines 1-15) and generating an execution module (creation of 'new cartridge instance', col. 7, lines 16-28; col. 7, line 35- col. 8, line 33<sup>1</sup>; 'Resource Manager', col. 10, lines 25-59<sup>2</sup>);
- reserving, when the stored JAVA program which is not contained in the execution module (col. 9, line 60-col. 10, line 10<sup>3</sup>) and which is beforehand stored in a database management system (DBMS) ('metadata', col. 9, lines 24-42<sup>4</sup>; 'DBMS', col. 31, lines 39-59) is invoked at execution of the execution

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<sup>1</sup> Refer to the cartridge routines that are executed within the Cartridge modules.

<sup>2</sup> The Resource Manger manages the execution of the Cartridge modules (see lines 27-33).

<sup>3</sup> After receiving a browser request, which includes a URL, the dispatcher sends the URL from the request to a virtual path manager that determines the cartridge, if any, associated with the URL. This is done by mapping the URLs to cartridges in metadata (Fig. 2, element 258).

<sup>4</sup> Cartridge information is stored for later access as metadata.



module (refer to example of cartridge (C1) used in col. 10, lines 25-45<sup>5</sup>), resources to be used by the program (cartridge authentication, col. 9, line 60-col. 10, line 24), checking unknown resources to be used by the stored JAVA program and determining resources to be set as resources unavailable to another program until a transaction is completed ('shutdown()' routine', col. 7, line 49-col. 8, line 7; col. 11, line 50-col. 12, line 63; col. 30, line 58-col. 31, line 5 (Fig. 7I)) and resources to be set as unavailable resources until the program is terminated ('shutdown()' routine', col. 7, line 49-col. 8, line 7; col. 11, line 50-col. 12, line 63; col. 12, line 65- col. 13, line 20, col. 13, lines 48-67), and registering information about said reserved resource in a resource managing table, which is corresponding to resources already reserved in the query processing in execution having invoked the program ('Resource Manager table', see Fig. 5; col. 11, line 23 – 49);

- releasing, in response to an input of a transaction completion request (col. 12, line 65- col. 13, line 20; col. 30, line 58-col. 31, line 5 (Fig. 7I)<sup>6</sup>) or issuance of a commit statement from the program, the resources set as unavailable resources until the transaction is completed in the stored program ('release of cartridge instances' in response to completed browser requests, col. 13, lines 37-67).

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<sup>5</sup> Examiner respectfully asserts that Cartridge C1 is invoked by the virtual path manager through the browser requests made. The Resource Manager then determines, after receiving receipt of requests from the dispatchers, whether any existing instance of C1 is available.

<sup>6</sup> At the notification of a completed transaction, control returns to intercepting another browser request.

However, while Jacobs teaches all of the above claimed subject matter and also teaches referring to a 'dispatcher state table' when releasing a cartridge resource (see Fig. 4, col. 12, line 7), Jacobs remains silent as to specifically:

- referring, at release of a transaction from the stored program, to a release resource managing table and the resource managing table to determine a reserved resource which is registered in the resource managing table and which is not registered in the release resource managing table; and
- releasing, the reserved resource having been determined by said referring step.

However, Fujita teaches analogous art that includes:

- referring, at release of a transaction from a stored program (lock releasing request sent from Resource Manager (RM) to Lock Manager (TM), Fig. 6, element 206, col. 13, line 65 – col. 14, line 15; col. 9, lines 14-19), to a release resource managing table ('Lock Manager (LM)' table T2 is looked up, Fig. 3, element 12; col. 9, lines 20-45; col. 14, lines 21-46) and a resource managing table to determine a reserved resource which is registered in the resource managing table ('Resource Manager (RM) table T1', see Fig. 3, element 11; col. 9, lines 4-13; col. 13, line 64 – col. 14, line 6, Fig. 6, elements 201-203) and which is not registered in the release resource managing table (col. 9, lines 5-67); and

- releasing, the reserved resource having been determined by said referring step (lock release of resources, col. 9, lines 46-57; col. 14, lines 21-46).

It would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify Jacobs to include referring, at release of a transaction from a stored program, to a release resource managing table and a resource managing table to determine a reserved resource which is registered in the resource managing table and which is not registered in the release resource managing table, and releasing, the reserved resource having been determined by said referring step, as taught by Fujita.

The ordinary skilled artisan would have been motivated to modify Jacobs per the above for the purpose of detecting deadlock in a multitasking system using a lock manager that manages resources that are locked by tasks (Fujita, col. 3, lines 20-50).

Referring to claim 7, the limitations of the claim repeat the respective limitations of claim 3 above in the form of an apparatus (Jacobs, col. 4, lines 20-22). Claim 7 is therefore rejected for the same reasons as claim 3.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl M Fernandes who can be reached on (571) 272-4018. The examiner can normally be reached on 9:00 am - 5:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on (571) 272-4023. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

October 15, 2005  
CMF



**UYEN LE**  
**PRIMARY EXAMINER**